

## **Method and Apparatus for Integrated Battery-Capacitor Devices**

### **Abstract of the Disclosure**

A combined battery and device apparatus and associated method. This apparatus includes a first conductive layer, a battery comprising a cathode layer; an anode layer, and an electrolyte layer located between and electrically isolating the anode layer from the cathode layer, wherein the anode or the cathode or both include an intercalation material, the battery disposed such that either the cathode layer or the anode layer is in electrical contact with the first conductive layer, and an electrical circuit adjacent face-to-face to and electrically connected to the battery. Some embodiments further include a photovoltaic cell and/or thin-film capacitor. In some embodiments, the substrate includes a polymer having a melting point substantially below 700 degrees centigrade. In some embodiments, the substrate includes a glass. For example, some embodiments include a battery deposited directly on the back of a liquid-crystal display (LCD) device.